

KIROV, S.A., kand.tekhn.nauk; LISTOV, A.M., kand.tekhn.nauk; KOPYSHTA, I.L., inzh.; DROZDOV, V.A., kand.tekhn.nauk; TITORENKO, N.Ye., kand.tekhn.nauk; BUTOR, A.I., inzh.; Primali uchastiye: ALEKSEYEV, A.P., kand.tekhn.nauk; MALYSHEV, Ye.G., kand.tekhn.nauk; GAGARIN, Yu.A., inzh.; TITOV, S.A., inzh.; TUMARINSON, N.S. inzh.; KRUTIKOV, V.I., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Completely precast buildings with few stories] Polnosbornye maloetazhnye zdaniia. Moskva, Vses. izdatel'sko-poligr. ob'edinenie M-va putei soobshchenia, 1962. 87 p. (Vsesoiuznyi nauchno-issledov. institut transportnogo stroitel'stva. Trudy no.44). (MIRA 15:8)

(Railroads—Buildings and structures)

(Precast concrete construction)

MALYSHEV, Ye.G., kand.tekhn.nauk; TITORENKO, N.Ye.

Using vibrated brick panels in construction for the transportation industry. Transp.stroi. 10 no.3:34-37 Mr '60.  
(MIRA 13:6)

(Building blocks)  
(Transportation--Buildings and structures)

ALEXANDER, A.P., kand. tekhn. nauk; TITOVSKO, M.Ye., kand. tekhn. nauk

Expand the use of keramzit in constructing large-panel buildings.  
Transp. stroi. il no.2:31-35 F '61. (TIA 14:2)  
(Lightweight concrete)

TITORENKO, N. Ye.

TITORENKO, N. Ye.: "Investigation of the basic properties of brick blocks and the selection of the parameters for the assembly equipment for industrial construction of road-side building." Min Transport Machine Building USSR. All-Union Sci Res Inst of Transport Machinebuilding. Moscow, 1956. (Dissertation for the Degree of Candidate in Technical Science.)

Knizhnaya letopis', No. 30, 1956. Moscow

*7-11-1956 N.Y.F.*

KIROV, S.A., kandidat tekhnicheskikh nauk; TITORENKO, N.Ye., kandidat tekhnicheskikh nauk.

Textbook on railroad buildings ("Railroad buildings." by B.N. Shatnev. Reviewed by S.A. Kirov, N.E. Titorenko.). Transp. stroi. 6 no. 11:32 N '56. (MLRA 10:1)  
(Railroads--Buildings and structures)

TITORENKO, N.Ye., kandidat tekhnicheskikh nauk.

In the Rumanian People's Republic. Transp.stroi.6 no.7:  
27-28 J1 '56.

(Rumania--Electric lines--Poles)

(MLRA 9:10)

1 2 3 4 5 6 7  
DZARAGAZOV, P.; TITORENKO, T.

Poultry sections for caged layers. Sel'.stroil. 11 no.10:  
5-6 0 '56.

(MLRA 9:12)

1. Nachal'nik Stavropol'skogo krayevogo upravleniya po  
stroitel'stvu v kolkhovakh (for Dzaragazov) 2. Starshiy inzhener  
Stavropol'skogo upravleniya po stroitel'stvu v kolkhovakh  
(for Titorenko).

(Poultry houses and equipment)

TITOROV, B.D., inzhener, redaktor; DUGINA, N.A., tekhnicheskiiy redaktor

[Physical metallurgy and the heat treatment of steel] Metallo-  
vedenie i termicheskaya obrabotka stali. Moskva, Gos. nauchno-  
tekhn. izd-vo mashinostroit. lit-ry, 1955. 55 p. [Microfilm]  
(MIRA 10:6)

1. Ural'skiy mashinostroitel'nyy zavod, Sverdlovsk.  
(Steel--Heat treatment)



SKLYUYEV, P.S.; PETROV, B.D.; TITOROV, B.D.; MOISEYEVA, Ye.G.

Quality of rolls for cold rolling. Stal' 23 no.7:651 J1 '63.  
(MIRA 16:9)

1. Ural'skiy zavod tyazhelogo mashinostroyeniya.  
(Rolls (Iron mills)—Testing)

TITOROV, B.D.

In the laboratory of the chief metallurgist of the Ural Machine  
Works. Zav. lab. 30 no.8:1027-1028 '64. (MIRA 18:3)

MIKHEYEV, M.N.; MOROZOVA, V.M.; TOMILOV, G.S.; TITOROV, B.D.;  
BOCHENKOV, V.S.

Magnetic control of the depth of the case-hardened layer of cold  
rolls. Zav.lab. 22 no.1:52-56 '56. (MLRA 9:5)

1. Ural'skiy filial Akademii nauk SSSR i Ural'skiy zavod tayzhe-  
logo mashinostroyeniya imeni S. Ordzhonikidze.  
(Steel--Testing) (Magnetic testing)

TITOROV, B.D., inzhener, redaktor; DUGINA, N.A., tekhnicheskii redaktor

[Technology of machine building; founding] Tekhnologiya mashino-  
stroeniia; liteinoe proizvodstvo. Sverdlovsk, Gos.nauchno-tekhn.  
izd-vo mashinostroitel. lit-ry, 1956. 66 p. (MLRA 10:1)

1. Ural'skiy mashinostroitel'nyy zavod, Sverdlovsk.  
(Foundry machinery and supplies)

SKLYUYEV, P.V.; TITOROV, B.D.

Review of A.S. Petrov and A.I. Karmanov's book "Manufacture  
of rolls for cold rolling." Metalloved. i term. obr. met.  
no.7:61-62 J1 '63. (MIRA 16:7)

(Rolls (Iron mills))  
(Petrov, A.S.)  
(Karmanov, A.I.)

TITOV, fmu

PA 233T20

USSR/Medicine, Veterinary - Tissue Therapy Oct 52

"Some Results of Application of the ASD Preparation," Titov, Moscow

"Veterinariya" Vol 29, No 10, pp 59,60

Titov claims that ASD is one of the most powerful preps in the over-all therapy of wounds, acting immediately after administration. Such rapid and strong general reaction is presumed to be due to the action of ASD on the cortex and subcortical layers of the brain: it changes the functions of the cardiovascular system and intensifies general

233T20

metabolism. Dosage and method of administration of ASD may be changed depending on the reaction of the organism. Titov administered the prep intravenously simultaneously with surgery, during various stages of the treatment of purulent-necrotic processes in the vitheps.

233T20

TITOV, A.

Introducing industrial building methods into industrial construction. Stroitel' arkhitekt. 8 no.6:3 Je '60.  
(MIRA 13:6)

1. Nachal'nik tekhnicheskogo upravleniya Ministerstva stroitel'stva  
USSR.

(Ukraine--Precast concrete construction)  
(Ukraine--Factories--Design and construction)

SOV/178-58-7-12/24

24

AUTHOR: Titov, A., Major General of the Signal Corps (Retired)

TITLE: It is Necessary to Activate the Work of the Military Scientific Societies (Ozhivit' rabotu voyenno-nauchnykh obshchestv)

PERIODICAL: Voyennyy svyaziat, 1958, Nr 7, p 30 (USSR)

ABSTRACT: The author complains about the lack of activity of the Signal Section of the Military Scientific Society (created more than 12 months ago at the Leningrad garrison). In his opinion, hundreds of officers and generals, on reserve status or retired could participate in the work of the Signal Section. However even Major General Timofeyev of the Signal Corps does not take any action to attract new members to the activities of the Signal Section. At the Moscow garrison, there is also a Signal Section of the Military Scientific Society, but there is no contact or cooperation between the Moscow and Leningrad sections.

Card 1/2



SOV/178-58-7-12/24

It is Necessary to Activate the Work of the Military Scientific Societies

In the author's opinion the periodical "Voyenny svyazist" should publish more reports on the activities of the signal sections working at the different garrisons.

Card 2/2

TITOV, A.

Radio

Radio in the service of cotton growers. Radio, 29, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952      Unclassified.

1. TITOV, A.
2. USSR (600)
4. Farm Management
7. Planning farmland organization, Sov.agron 11 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

TITOV, A., inzhener.

Improving oil filtration in the ZIS-120 engine. Avt.transp. 32 no.6:  
22-23 Je '54. (MLRA 7:9)  
(Automobiles--Lubrication) (Filters and filtration)

TITOV, A., inzhener.

Corrosive destruction of the M-20 car body and ways of preventing  
it. Avt.transp. 33 no.3:17-18 Mr '55. (MIRA 8:5)  
(Automobiles - Bodies) (Corrosion and anticorrosives)

TITOV, A., inzh.; SERADSKIY, Yu., inzh.

Experimental unit for manufacturing swollen slag materials.  
Stroi. mat. 4 no.2:20-21 F '58. (MIRA 11:2)  
(Slag cement)

TITOV, A.

The reinforced-concrete assembled structure for a universal single-floor industrial building. p. 459.

POZEMNI STAVBY. (Ministerstvo stavebnictvi) Praha, Czechoslovakia, Vol. (1) no. 9, (September) 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 11, November 1959.

uncl.

TITOV, A.I.

Storming the sky. Kryl. rod. 16 nč.9:10-11 S '65.

(MIRA 18.12)



TITOV, A., arkhitektor

Housing construction in the Northern Caucasus. Zhil.stroi.  
no.10:22-27 '59. (MIRA 13:2)  
(Caucasus, Northern--Architecture, Domestic)

CA

12

New laboratory equipment for large scale examination of milk. A. ~~Tina~~ *Tina, Technisch. Maschinenbau*. From 1939, No. 3, 15-18; *Khm. Referat. Zhur.* 1939, No. 7, 71  
--There are described an app. for distributing  $H_2SO_4$ , an automatic app. for measuring  $H_2SO_4$  into 24 samples, an app. for automatic measurement of amyl alc. into 24 samples, an app. for the detn. of mech. contamination of milk, etc  
W. R. Henn

COMMON ELEMENTS

MATERIALS INDEX

ASM-A LA METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED INDEXED

COLLECTION

QUALITY CONTROL

CA

12

Improvement of stability of butter. V. Bogdanov and A. Titov. *Molochnaya Prom.* 12, No. 9, 26-31(1951).—Results of plant studies show that for storage at subzero temp. the butter from sweet cream is superior, since microbial activity is essentially stopped by low temp. Acid cream butter, however, shows continuation of chem. processes even at low temp., especially if NaCl and acids are allowed to remain in the product, which develops a fishy taste. At temp. above 0° the latter butter type, however, is more stable since microbe development is retarded in it by the presence of lactic acid.

G. M. Kosolapoff

1. TITOV, A.
2. USSR (600)
4. Butter
7. How to achieve the desired moisture content in melted butter? Mol. prom. 12 no.12. 1952.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

TITOV, A.

Quality, stability, and peculiarities of butter prepared by the  
Meleshin method. Molochnaya Prom. 14, No.4, 13-16 '53. (MLRA 6:3)  
(CA 47 no.15:7688 '53)

Китов, А. and Митин, Л.

\*Enrichment of milk with vitamin D МОЛОЧНАЯ ПРОМ, 1953, 14/8 (30-33)

Control of feeding of cows, irradiation of milk with UV rays, and addition of vit. D concentrates are discussed.

Krukovsky (Chem. Abstr.)

SO: Excerpta Media Section XVII Vol. 1 No. 1.

Structure and stability of sweet-cream butter manufactured by Meleshin's process. A. T. Kov. *Molokandov* (Proc. 15, No. 1, 1954, 434) - 47, 1954. - The storage stability of butter manufactured by Meleshin-continuous I and ordinary batch II methods, as influenced by the size distribution of the water phase droplets and completeness of the phase conversion from water to water in oil is discussed. The data show that the microorganism caused spoilage of butter during its storage at sub-zero temperatures is connected with the size of the water phase droplets. The data show that the keeping quality of I was found to be superior to that of II, when held at  $-10^{\circ}$  for 12 months. The data are given. V. N. K.

SHERSHEN', L., kand. tekhn. nauk; TITOV, A.; ZUBOV, A.; SOLOMONOV, S.

Opinions of the leaders of the economic councils and special industrial designers bureaus. Tekh. est. 2 no.7:4-6 J1 '65.

(MIRA 18:8)

1. Predsedatel' Tekhniko-ekonomicheskogo soveta Leningradskogo soveta narodnogo khozyaystva (for Shershen'). 2. Nachal'nik Spetsial'nogo khudozhestvenno-konstruktorskogo byuro Leningradskogo soveta narodnogo khozyaystva (for Titov). 3. Zamestitel' predsedatelya Leningradskogo soveta narodnogo khozyaystva (for Zubov). 4. Glavnyy inzh. Spetsial'nogo khudozhestvenno-konstruktorskogo byuro Leningradskogo soveta narodnogo khozyaystva (for Solomonov).



KUDRITSKIY, R.; VOLKOV, A.; FOGEL', Z.; PODOBED, Yu.; TITOV, A.; SHEIN, R.;  
LITSITIS, Ya. [Licitis, J.]; OSTROVENETS, V.; SEMENTSOV, N.

Specialization is indispensable. Tekh. est. no.4:22-23 Ap '65.

(MIRA 18:6)

1. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Kiyevskogo soveta narodnogo khozyaystva (for Kudritskiy, Volkov, Fogel').
2. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Moskovskogo gorodskogo ekonomicheskogo rayona (for Podobed).
3. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Leningradskogo ekonomicheskogo rayona (for Titov).
4. Spetsial'noye khudozhestvenno-konstruktor-skoye byuro Sredne-Ural'skogo soveta narodnogo khozyaystva (for Shein).
5. Spetsial'noye khudozhestvenno-konstruktorskoye byuro Soveta narodnogo khozyaystva Latviyskoy SSR (for Litsitis, Ostrovenets, Sementsov).

OL'KHOVNIKOV, Yu.; GURTSKAYA, P.; BOROVITSKIY, B.; TITOV, A.; YANKA, I.

The roll call of the detachments of the "Searchlight of the Communist Youth League" movement continues. Tekh.mgl, 30 no.11:18-19 '62.

(MIRA 16:9)

1. Chlen oblastnogo shtaba Kommunisticheskoy partii, Rostov (for Ol'-khovnikov). 2. Direktor Omskogo shinnogo zavoda (for Borovitskiy). 3. Sekretar' komiteta komsomola snakhty No.5 tresta Tkvarcheliugol'", Tkvarcheli (for Gurtskaya). 4. Nachal'nik oblastnogo shtaba Kommunisticheskoy partii, sekretar' oblastnogo komiteta Vsesoyuznogo Leninskogo Kommunisticheskogo soyuza molodezhi (for Titov). 5. Predsedatel' kolkhoza "Zarya kommunizma", selo Tashlyk, UkrSSR (for Yanka).

(Communist Youth League)

TITOV, A. (Vladivostok)

Fiery night. Pozh.delo 9 no.5:22 My '63. (MIRA 16:5)  
(Vladivostok--Ships--Fires and fire prevention)

TITOV, A., kand. arkhitektury

Large-panel apartment houses for Krasnodar Territory. Zhil. stroi.  
no.12:20-21 '61. (MIRA 15:2)  
(Krasnodar Territory--Apartment houses)

ANTONYUK, K., inzh.; TITOV, A., inzh.

New design for the walls of biofilters in purification structures.  
Sel'. stroi. 16 no.12:17-18 D '61. (MIRA 15:2)  
(Sewage--Purification)

TITOV, A.

Construction workers improved their work. Prom. koop. 14 no.5:5 My  
'60. (MIRA 13:12)

1. Zamestitel' predsedatelya pravleniya oblpromsoвета, Pskov.  
(Pskov—Construction industry)

TITOV, A.

They master related vocations. Prom.koop. 14 no.9:28 S '69.  
(MIRA 13:9)

1. Zamestitel' predsedatelya pravleniya oblpromsoвета, g.Pskov.  
(Pskov--Service industries)

MaLYSHEV, Georgiy Andreyevich; TITOV, A.A., redaktor; GALAKTINOVA, Ye.N.  
tekhnicheskii redaktor.

[Repairing bodies of ZIS-155 motorbuses] Remont kuzovov avtobusov  
ZIS-155. Moskva, Nauchno-tekhn. izd-vo avtotransportnoi lit-ry,  
1955. 139 p. (MLRA 8:8)  
(Motorbuses--Repairing)



KALASHNIKOV, V.D., inzhener; ~~TITOV, A.A., inzhener.~~

The new Ulan Bator-Sining railroad line. Zhel.dor.transp. 37 no.1:  
71-72 Ja '56. (MLRA 9:3)  
(Asia--Railroads)

BELYAYEV, Leonid Mikhaylovich; YUSHTIN, Yevgeniy Ivanovich; TITOV,  
A.A., otvetstvennyy redaktor; MISHKEVICH, G.I., redaktor;  
KAMOLOVA, V.M., tekhnicheskiiy redaktor.

[Safety engineering in the operation of hoisting machinery in  
ship building] Tekhnika bezopasnosti pri ekspluatatsii gruzo-  
pod"emnykh mekhanizmov, v sudostroenii. Leningrad, Gos.soiuznoe  
izd-vo sudostroitel'noy promyshl. 1957. 69 p. (MLRA 10:6)  
(Cranes, derricks, etc.--Safety measures)

TITOV, A.A.

Improving the DUK apparatus. Veterinariia 35 no. 7:81- J1 '58.  
(MIRA 11:7)

1. Zaveduyushchiy Shumikhinskoy vetbaklaboratoriyey, Kurganskaya  
oblast'.

(Spraying and dusting equipment)

*CX*

Regeneration of used fixing baths. A. A. Titov and T. N. Kreitzberg. *Photochem. Ind.* 3, 67 (1961).  
For the regeneration of fixing baths, "Rongalite," Na formaldehydesulfoxylate, is more satisfactory than  $\text{NaHSO}_3$ . The reaction should be carried out in alk. soln. and after pptn. of the metallic Ag the fixing bath is suitable for use.  
C. B. K. Mies

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS																										1ST AND 2ND CROSS																									
1ST AND 2ND CROSS																										1ST AND 2ND CROSS																									
<p>Nature of photographically active gelatins. A. I. Kabinovich and A. A. Titov. <i>Kino-Photo Inst. Moscow</i> 2, 19-20 (1934). -The photographic activity of gelatin is proportional to its content of labile S as deid. by the method of Sheppard and Hudson (C. A. 24, 1507), and possibly to other substances forming part of the gelatin mol. Inactive gelatins can be prepri. by dialysis and oxidation of the gelatin. By the 1st treatment only materials in the soln. are removed which contain photographically active groups. By the 2nd treatment the whole of the labile S of the gelatin and other reactive radicals are removed. The removal of labile S from gelatin does not affect the growth of fog, which is thus not intimately associated with sensitivity. C. R. K. Mees</p>																																																			
<p>ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>1ST AND 2ND CROSS</p>																																																			

COMMON ELEMENTS										PROCESSING AND PROPERTIES INDEX										COMMON VARIABLE INDEX									
<p>CA</p>										<p>The protective action of gelatin toward the hydrosols of metallic silver and of silver sulfide. A. A. Titov. <i>Kino-Foto-Khim. Prom.</i> 1938, No. 9, 44-50; <i>Khim. Referat. Zhur.</i> 2, No. 3, 129 (1939).—Very small concns. of gelatin increase the velocity of coagulation, whereas large concns. decrease the velocity of coagulation of Ag and Ag<sub>2</sub>S sols. The protective action on the sols of Ag<sub>2</sub>S depends to a considerable extent on the grade of gelatin, whereas all grades of gelatin exert practically the same effect on the sols of Ag. The protective action depends not so much on the gelatin substance as on impurities which possess the ability of "elective" protection in regard to Ag sols. The protective action gradually decreases with decreasing pH; at values of pH below the isoelec. point, gelatin exerts on both sols a sensitizing rather than a protective action. Up to values of pH = 4.35 gelatin coagulates Ag<sub>2</sub>S sols. At pH &gt; 4.7 the effect of H-ion concn. is much smaller for Ag sols than for Ag<sub>2</sub>S sols. This fact points to an effect of adsorption in the phenomenon of protection.</p>										<p>W. R. Henn</p>									
<p>ASH-STA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
<p>REGION DIVISION</p>										<p>SECTION</p>										<p>COLLECTION</p>									
<p>1 2 3 4 5 6 7 8 9 10</p>										<p>11 12 13 14 15 16 17 18 19 20</p>										<p>21 22 23 24 25 26 27 28 29 30</p>									

P.A.

*Sensitizing + Sensitometry*

460

771.535

New Data on the Nature of Photographic Sensitivity. K. V. CHIRISOV, A. A. TITOV and A. A. MIKHAILOVA. *Compt. rend. acad. sci. U.S.S.R.*, 54, 708-12, 1946. - In an investigation of the nature of sensitivity centres in the silver halide grains of a photographic emulsion, the authors determined both the amounts of silver ions that reacted with gelatin and the silver sulphide formed during heating of a mixture of solutions of gelatin and silver nitrate in water (Titov, *Trudy Nauch. Issledovatel. Kino-Foto Inst.*, No. 7, 34, 1946), and the amounts of silver not bound by halogen and the silver sulphide formed on the surface of grains during after-ripening of the photographic emulsion (WAGERT AND LUNA). In both instances, formation of silver sulphide takes place from the beginning of the heating, and continues with slowly diminishing rate until a limit determined by the labile sulphur content of the gelatin is reached. Non-halogen silver increases, reaches a plateau in which the amount remains approximately constant for a time, then abruptly increases to a maximum. The abrupt increase represents the formation of metallic silver centres by the autocatalytic decomposition of adsorption (or complex) compounds formed between silver ions and certain components of the gelatin. The plateau represents an induction period, and its length gives a quantity expression of the formation of thermostable silver-gelatin complexes and the content of impurities (silver sulphide and silver) formed inside the grains during the first ripening. Parallel observations on the change of photographic properties of the emulsion indicate that silver sulphide plays a secondary role in determining these properties. The growth to a maximum and subsequent diminution of sensitivity occurs during

(over)

the induction period of the formation of silver, which is assumed to be the most important factor in chemical sensitizing. Results are given on four emulsions. The data also indicate a relation between fog and metallic silver formation, the inflection points of the silver formation curves corresponding to those of the fog-formation curves. An energetic reducing agent, hydrazine, present during the first ripening of the emulsion (recrystallization in the presence of ammonia) produces a decrease in photosensitivity whereas a compound containing labile sulphur produces an increase. The authors suggest that imperfections within the crystal trap the electrons in a metastable state and prevent their recombination with halogen during the initial stage of photolysis, and that silver sulphide forms such imperfections. Metallic silver plays a substantial part in trapping electrons on the surface of the grain. Metallic silver inside the grains causes desensitization. In order to increase the probability of photoelectrons hitting the sites of low accumulation of silver atoms on the surface, it seems important to bring them in contact with the "films" of silver sulphide which cover a considerable portion of the surface of the grains.

*Chem. Abstr.*



34

23

\*872. New Data Concerning the Nature of Photographic Sensitivity. (In Russian.) K. V. Tchibisov, A. A. Titov, and A. A. Michailova. *Reports of the Academy of Sciences of U.S.S.R.*, v. 64, Dec. 11, 1946, p. 713-716.

Investigations showed that the theory of the centers of sensitivity should be considered from the point of view of the existence of the light-sensitive system: silver bromide-silver sulfide-metallic silver.

TITOV, A.A.

The relations of a gelatin to silver ions. Trudy NIKFI no.7:52-58  
'47. (MIRA 11:6)

1. Laboratoriya fotoprotsessov Nauchno-issledovatel'skogo kino-  
foto-instituta, Moskva.

(Photographic emulsions)

TITOV, A. A.

K. V. CHIBISOV and A. A. TITOV

"Finishing Silver and the Formation of Fog," Trans Kino-Foto Scientific Research Institute USSR, No. 8, 95-104, 1947 (Printed in 1948).

Chibisov and Titov have published extensively for years on topics in this field. They over-emphasize the importance of finishing silver as a component of chemical sensitizing and underestimate the importance of sulfur sensitizing in this and other publications, but the work reported here appears to be quite thorough and reliable.

IX

TITOV, A. A.

K. V. CHIBISOV and A. A. TITOV

"New Data on the Nature of Photographic Sensitivity (Communication 101), K Trans Kino-Foto Scientific Research Institute USSR, No. 8, 115-125, 1947 (Printed in 1948).

These are experienced workers but their results must be regarded with caution, since it has not been demonstrated in our laboratories that their analytical methods are accurate.

IX

34

834. New Data on the Nature of Sensitivity of Photographic Emulsions. (In Russian.) K. B. Chibisov, A. A. Tlov, and A. A. Mikhailova. *Journal of Physical Chemistry* (U.S.S.R.), v. 21, June 1947, p. 643-652.

The interaction between silver ions and gelatin in a homogeneous solution and in a photographic emulsion was investigated. Results are discussed in terms of reaction mechanisms.

CHIBISOV, K.V.; TITOV, A.A.

Present status of the problem of photographic sensitivity. Trudy  
NIKFI no.8:5-19 '48. (MIRA 11:5)

(Photographic sensitometry)

TITOV, A.A.; RATNER, I.H.

Kinetics of the relation of the gelatin to silver ions. Trudy NIIPI  
no.8:20-40 '48. (MIRA 11:5)

(Photographic emulsions)

TITOV, A.A.

Photographically active components of a gelatin. Trudy NIKFI no.8:  
41-53 '48. (MIRA 11:5)

(Photographic emulsions)



CHIBISOV, K.V.; TITOV, A.A.

New data on the nature of photographic sensitivity. Trudy NIKFI no.8:  
115-125 '48. (MIRA 11:5)

(Photographic sensitometry)

CA

The mechanism of ripening of photographic emulsions.  
1. The "second" ripening. (The effect of gelatin, temperature, and the concentration of the bromine ions.)  
K. V. Chibisov, A. A. Titov, and A. A. Mikhailova (Sci. Research Inst. Cinema and Photography, Moscow).  
Zhur. Fiz. Khim. 23, 1387-98 (1949); cf. C.I. 42, 2190e.  
The emulsion was prepn. (a) by adding 50 ml. soln. contg. 12 g. pure  $[Ag(NH_3)_2]NO_3$  to 50 ml. soln. contg. 2.5 g. gelatin (1) and 10.5 g. KBr, or (b) by an industrial method except that cryst.  $[Ag(NH_3)_2]NO_3$  was used instead of a  $AgNO_3$  soln. in aq.  $NH_3$ , or (c) by another industrial method with  $AgNO_3$  in  $H_2O$  rather than in aq.  $NH_3$ . The emulsion was ripened for 1 hr. at 45° and then coagulated with  $Na_2SO_4 \cdot 10H_2O$  (9 g. in 10 ml. for 10 ml. emulsion); the coagulate thus obtained contained 7% I and 2-3% Ag (as AgBr). It was ripened for 1 hr. ("2nd ripening"), and its photosensitivity  $S$  (above the fog) and log  $D$  were detd.  $S$  increased with  $t$  to a max.

and then decreased.  $D$  increased with  $t$  first slowly, then rapidly, and the rapid rise started approx. at the  $t(t_2)$  corresponding to the max.  $S$ . The height of this max. was different for emulsions (a), (b), and (c) but was independent of the I sample used in the 2nd ripening. The  $t_2$  at 45° varied greatly (1-13 hrs.) with the I sample. In some expts. KBr or  $AgNO_3$  was introduced before the 2nd ripening. The magnitude of the max.  $S$  usually was not affected; in some instances it was smaller at smaller ripening. The  $t_2$  increased, e.g., from 3 to 17 hrs. when  $C$  increased 10-fold.  $D$  was greater the smaller  $C$  was. Temp. increase (45-60°) scarcely affected  $S$ , but reduced  $t_2$ , e.g. from 15 to 2 hrs. The energy of activation of the formation of max.  $S$  was 20-25 kcal./mole. Presumably, it belonged to decomposition of the compounds. The independence shows that all the reaction nuclei have formed during the 1st ripening and only increased in size afterwards.  $t_2$  depends on  $C$  because Br ions charge AgBr crystals and reduce the diffusion of reducing substances to these; it depends on the I sample as the concentration of the reducing substances varies from sample to sample.  
J. J. Bikerman

*Kinetics of ripening and finishing of photographic emulsions and the chemical nature of light-sensitive centers.*  
K. V. Chibisov, A. A. Tily, and A. A. Mikhailova.  
*Doklady Akad. Nauk S.S.S.R.* 70, 453-6 (1950).—Ripening of photographic emulsions which were prepl. from cryst.  $\text{Ag}(\text{NH}_4)_2\text{NO}_3$  was studied by using the following types of gelatin: A did not produce any  $\text{Ag}_2\text{S}$  under the ripening conditions employed, B produced less than  $10^{-4}$  moles  $\text{Ag}_2\text{S}$  per mole  $\text{Ag}$  halide, and C produced  $\text{Ag}_2\text{S}$  in a considerable quantity. When the logarithm of the rate of the formation of metallic  $\text{Ag}$  during the ripening process was plotted as a function of the reciprocal of the abs. ripening temp., straight lines were obtained which were parallel for the 3 types of gelatin. The analogous curve for the rate of formation of  $\text{Ag}_2\text{S}$  (for gelatin C only) was not a straight line. Plots of the logarithm of the rate of attainment of max. sensitivity and of the rate of fog formation as a function of the reciprocal ripening temp. again gave straight lines. Only for gelatin A were they parallel to the lines obtained for the formation of metallic  $\text{Ag}$ , whereas with gelatin B and C, which give off  $\text{H}_2$  to the halide, straight lines of greater slope resulted. Conclusion: The sensitivity specks formed with any of the 3 types of gelatin consist of metallic  $\text{Ag}$ , and  $\text{Ag}_2\text{S}$  influences the ripening speed only.  
M. Biltz

C/A

The role of gelatin in the formation of centers of photosensitivity. K. V. Chibisov, A. A. Titov, and A. A. Mikhailova. *Doklady Akad. Nauk S.S.S.R.* 70, 659-661 (1950); cf. *C.A.* 42, 2193c. — The rate of formation and no. of centers of photosensitivity vary with the different gelatins examined. Two types of behavior are recognized: (1) There is a "ceiling" of photosensitivity that is reached over a wide range of Ag ion concns., though at different times; (2) the max. photosensitivity that can be attained is quite different for different Ag-ion concns. Over the temp. range 45-61° the same max. photosensitivity is reached, though at different times. The log of the time to reach max. photosensitivity is an inverse function of the abs. temp., as predicted by the Arrhenius equation. The probability of formation of a greater no. of inner centers of photosensitivity would lead to the formation of a greater no. of centers at the surface of the microcrystals by the termination of the first ripening. This would affect the rate of the second ripening, insofar as this stage takes place at a spot of earlier formation of centers. Therefore the greater the "contamination" introduced by the gelatin into the solid phase of the emulsion during the first ripening, the shorter the time for reaching the max. photosensitivity at the second ripening. This conclusion is confirmed by expts.

H. G. Livingston

CA

Temperature dependence of the processes of ripening of the photographic emulsion and of photographic development. Ts. S. Arnold and A. A. Titov. *Doklady Akad. Nauk S.S.S.R.* 73, 1313-16(1950).—The point of view, according to which the centers of photosensitivity, which take part in the production of the centers of the 2nd image, and the fog centers produced in the course of the 2nd ripening of the photographic emulsion, have the same metallic-Ag nature and are formed autocatalytically at that ripening stage, full development being merely a matter of the Ag microcrystal attaining the size of a visible "development center," is borne out by the similarity of the shapes of the curves of the (1) fog d.,  $D_0$ , (without action of light) as a function of the length,  $l$ , of the 2nd ripening, under const. conditions of development, at const.  $l$ , and (3) the optical d.,  $D$ , of the image as a function of the length,  $l$ , of exposure at const.  $l$  and  $l$ . The 3 curves are all similar in shape to the curve of growth of the size of a development center as a function of  $l$ . The common mechanism of the processes

of 2nd ripening, of exposure, and of development is reduction of  $Ag^+$  ions by the constituents of the gelatin or the developer. Inasmuch as the reducing agents are always in great excess, these processes are kinetically of the 1st order, and, consequently, the time  $\tau$  necessary for the attainment of a definite size of the metallic Ag grain, i.e. of a definite optical d., must be related to the abs. temp. by  $\ln \tau / d(1/T) = E/R$ . Linear plots of  $\ln \tau$  against  $1/T$  for different values of  $D_0$  or  $D$  give for the activation energy  $E$  values ranging from 18.9 to 41.8 kcal./mole. Generally,  $E$  decreases with increasing size of the center (increasing optical d.) particularly at the stage of 2nd ripening, much less in the development process. With highly ripened emulsions, and high  $D$ , the activation energy shows a tendency to increase with the size of the developed grain. The autocatalytically accelerated growth of a center is linked not only with the increase of the frequency factor, i.e. the increase of the no. of the reactive  $Ag^+$  ions, but also with an increase of the catalytic activity of the center with its increasing size. The fall of the catalytic activity of a center past a certain crit. size is related to the phenomena of solarization and fog inversion.

N. Thon

CHIRISOV, K. V.; TITOV, A. A.; MIKHAYLOVA, A. A.

Photochemistry

Nature of the centers of photo-sensitivity and the part played by gelatin in their formation. Usp. nauch. fot., No.1, 1951.

9. Monthly List of Russian Accessions, Library of Congress, June <sup>1952</sup>~~1953~~, Uncl.

*Titov, P. A.*

USSR.

✓ The effect of sulfur compounds on the kinetics of the chemical ripening of photographic emulsions. *K. V. Chibrikov, A. A. Titov, and A. A. Kikhalova. Dokl. Akad. Nauk S.S.S.R. 78, 319-22 (1951); cf. C.A. 44, 2877b, 8805a; 45, 1443g.*—To det. the effect of S compds. on the secondary aging of emulsions, the influence of thiosinamine and  $\text{Na}_2\text{S}_2\text{O}_4$  on the sensitizing action was studied. The results indicate that in the aging process no  $\text{Ag}_2\text{S}$  is formed in the emulsion. The S compds. formed on the surface of the  $\text{AgBr}$  under the influence of the S-bearing components of the gelatin have no sensitizing effect. These compds. only increase the rate of chem. aging in so much as they increase the rate of the reduction process—the autocatalytic process of formation of  $\text{Ag}$  centers of photosensitivity. *J. Kovtar Leach*

*qfw*

5

Role of the internal centers formed in the photolysis of emulsions in the process of ripening. I. M. Ratner and A. A. Titov, *Doklady Akad. Nauk S.S.S.R.* 80, 217-20 (1951).—A photographic emulsion was prepd. by two-step emulsification of an ammoniacal Ag soln. in a soln. of KBr contg. gelatin and  $\text{NaNO}_3$ , followed by 35-min. standing at  $40^\circ$ , centrifugation of the AgBr, and redispersion in a fresh gelatin soln. for 2nd ripening. The emulsions were illuminated with known intensities  $I$  of 200, 60 and 120 sec.) or light either in the course of the 1st (30, 60 and 120 sec.) or 2nd emulsification (120 sec.), or 15 min. after the end of the 1st ripening (120 sec.), and curves of the max. sensitivity  $S$  and of the log  $d$ ,  $D$ , were detd. in each case. Illumination after the 1st ripening results in strongly increased  $D$ , which prevents detn. of  $D$ . In contrast, illumination at the beginning of the 1st emulsification, even with 110 lux for 30 sec., produces no significant increase of  $D$ ; however, if the illumination is prolonged or is applied at later stages of 1st ripening, an increase of  $D$  occurs at increasingly lower  $I$ . In all cases,  $S$  as a function of log  $I$  passes through a main. These results reveal a fundamental difference between internal centers, seated deep in the crystal grains, and the surface centers produced by illumination and responsible for the fog  $d$ . The internal centers do not come into contact with the developer and cannot therefore catalyze its action. The desensitizing effect of the internal centers, which results in the min. of  $S$ , is readily explained by the competition between internal and surface centers for photoelectrons. The increase of  $S$  beyond the min. cannot be attributed to an increase of the size of the internal centers, and to increasing prevalence of their electron-donor over the electron-acceptor function, as the spectral distribution of the sensitivity is practically independent of the illumination (1500–1,000,000 lux, 30 sec. at the beginning of the 1st emulsification). Rather, the effect is due to a decrease of the acceptor activity of the centers beyond a certain critical "optimum" size. With increasing  $I$ , the no. of the low-activity centers, exceeding the optimum size, increases, and their competition with the surface centers for photoelectrons weakens; this causes an increase of  $S$ . This process is the reverse of that responsible for the fall of  $S$  in the 2nd ripening

beyond the max. — owing to all-radiative increase of the min. of nonstable Ag in the surface centers. N. Titov

40



TITOV, A. A.

Chemical Abst.  
Vol. 48 No. 9  
May, 19, 1954  
Photography

Kinetics of chemical ripening of photographic emulsions and the role of sulfur compounds. ~~V. K. V. Chibrikov, A. A. Titov, and V. A. A. Mikhailova. Doklady Akad. Nauk S.S.S.R. 84, 547-50 (1952); cf. C.A. 45, 1443g.~~—It is assumed that the 2nd ripening process is a reduction process which can be accelerated by S compds., but the S compds. do not influence the max. light sensitivity of the emulsion. This is in contrast to Sheppard's theory about Ag<sub>2</sub>S specks as centers of light sensitivity. When N<sub>2</sub>H<sub>4</sub> (0.002 g. N<sub>2</sub>H<sub>4</sub>.H<sub>2</sub>SO<sub>4</sub> to 1 g. AgBr) was added at the beginning of the 2nd ripening, the results obtained were similar to those obtained when S compds. such as Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> or Na<sub>2</sub>S were added. Chem. ripening was accelerated by N<sub>2</sub>H<sub>4</sub>, but color sensitivity was not affected. With both N<sub>2</sub>H<sub>4</sub> and S compds. the formation of adsorption compds. on the emulsion microcrystals leads to acceleration of the reduction process. The polar N<sub>2</sub>H<sub>4</sub> mol. is adsorbed; and this loosens the Ag bonds. The N<sub>2</sub>H<sub>4</sub> reduces AgBr on the surface of the microcrystals, and these Ag specks are the centers of light sensitivity. The N<sub>2</sub>H<sub>4</sub> and the S compds. caused different effects of acceleration with different gelatins, but the degree of acceleration was parallel,  
E. M.

*Handwritten signature/initials*  
5/30/54

AA.TITOV, A. P.

6

Mechanism of ripening of photographic emulsions. II. Relation between the processes of change of light-sensitivity, growth of fog, and formation of silver during ripening. A. A. Mikhailova, I. M. Ratner, A. A. Titov, and K. V. Chubisov (All-Union Cine-Photo Inst., Moscow). *Zhur. Fiz. Khim.* 27, 860-77(1953); cf. C.A. 44, 2877b, 46, 6018c.—The light-sensitivity ( $S$ ) and fog d. ( $D$ ) were measured of several photographic emulsions, each at various stages of secondary ripening; the amt. of metallic Ag ( $a$ ) in each sample was detd. by fixation of the unexposed emulsion at  $10^\circ$  followed by soln. of the residual Ag in  $HNO_3$  and potentiometric titration. Data on  $S$ ,  $D$ , and  $a$  are presented graphically for emulsions of AgBr (I), ripened with and without  $NH_3$ , I with 3, 6, and 7.6 mole % AgI, ripened with  $NH_3$ , and I with 1 and  $3 \times 10^{-4}$  g. thiosinamine/g. of gelatin, ripened with  $NH_3$ . Other graphs show the effects of variation of bromide concn., temp. of secondary ripening, and the amt. of pre-exposure (from 0 to  $2.4 \times 10^3$  lux-sec. during first ripening). The temp. dependence ( $c$ ) of the rate of growth of  $S$  and  $D$ , expressed as the gradient of the linear curve of  $R \ln t$  plotted as a function of  $1/\theta$ , where  $t$  is the time required for  $S$ ,  $D$ , or  $a$  to reach a given value and  $\theta$  is the abs. temp., is the same for  $S$  and  $D$  in any given emulsion; the  $c$  of  $a$  may be the same or different. On the basis of exptl. data the following law is proposed: the max. sensitivity always coincides with the beginning of sharp increase of fog and with the end of the induction period for the formation of free Ag.

J. W. Loweberg, Jr.

BB 84

TITOV A. A.

USSR .

77.01 : 77.021.11  
Some Similarities and Differences in the Processes Involved in Photolysis and Second Ripening of Photographic Emulsions. A. A. TITOV and B. G. VARSHAVER. Dokl. Akad. Nauk SSSR., 1953, 91, 111-114. Characteristic curves are obtained for layers of diluted emulsions, only one grain thick, after various periods of second ripening, and from them are deduced the "photolytically equivalent ripenings"  $\Delta H/\Delta \tau$ , where  $\Delta H$  = period of additional exposure producing the same effect as an additional period of ripening  $\Delta \tau$ . The variations of this quantity with the photographic density of the developed single grain layer indicate that in second ripening, the grains are mainly surface sensitized, whereas in photolysis, sensitization may occur equally on the surface and in the interior of a grain.  
J. Appl. Chem.

62  
1

K-11

7 ITOV, A A

Category : USSR/Optics - Scientific photography

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2652

Author : Ratner, I.M., Titov, A.A.

Title : Role of Internal Centers Formed in the Photolysis of Emulsion in the Maturation Process.

Orig Pub : Uspekhi nauch. fotografii. T. 3. M., Izd-vo AN SSSR, 1955, 61-65

Abstract : Investigation of the effect of the Ag-centers, formed in the first maturation, on the maximum light sensitivity  $S_{max}$  and on the fog  $D_0$  corresponding to it, attainable in the second maturation. The Ag-centers were produced by exposing the emulsion during various stages of the first maturation with an incandescent lamp ( $T_c = 3000^\circ$ ) for 5 -- 120 seconds, with illumination intensity  $E$  1 --  $10^6$  lux. The results are represented by curves  $S_{max} = f(\log E)$  and  $D_0 = f(\log E)$ . As  $E$  increases,  $S_{max}$  and  $D_0$  at first remain almost unchanged, after which  $S_{max}$  diminishes rapidly and  $D_0$  increases slightly. After passing through a minimum,  $S_{max}$  again increases, while  $D_0$  increases sharply at the same time. The lower the exposure and the later (at the later stage of the first maturation) it is produced, the lower the values of  $E$  at which  $S_{max}$  starts to diminish and  $D_0$  starts to increase. The curve for the increase of the non-haloid Ag in the first maturation is parallel to the curve of  $D_0$ . In the authors' opinion the internal Ag centers formed at the start of the first maturation are subsequently

Card : 1/2

K-11

Category : USSR/Optics - Scientific photography

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2652

"overgrown" by a layer of AgBr and therefore cannot act as fog centers, but compete with the surface center for the capture of photoelectrons, and therefore cause a decrease in  $S_{max}$ . The increase in  $D_0$  occurs under exposure conditions that increase the probability of the emergence of the Ag centers to the surface. The increase in  $S_{max}$  after passing through the minimum is attributed not to the Devau effect, since the spectral sensitivity is independent of the exposure conditions, but apparently to the decrease of the acceptor ability of Ag centers that have grown past a certain "critical" size. The same cause is used by the authors to explain the drop in  $S$  during the second maturation after reaching a maximum in the normal synthesis of the emulsions.

Card : 2/2

WITTEN, J. A. WITTEN, J. A., and WITTEN, J. A.

"On the formation and the role of the active centres in the photographic process," a paper submitted at the International Conference on Scientific Photography, Cologne, FRG, 24-27 Sep 67.

ZELVENSKIY, Ya.D.; TITOV, A.A.; SHALYGIN, V.A.

Vapor-liquid equilibrium of some diluted solutions. Khim. i  
tekh. topl. i masel 9 no.3:1-7 Mr'64 (MIRA 17:7)

1. Moskovskiy ordena Lenina khimiko-tekhnologicheskii institut  
imeni Mendeleyeva.

SELIVENSKY, Ya.D.; TILLO, A.A.; SHALYGIN, I.S.

Investigating the removal of chlorine-containing impurities from  
hexamethylene diisocyanate by means of selective traders. Khim.  
prom. no.6:425-428 Je '64. (MIRA 12:7)



KHONGAUZ, A.N. (Moskva); LYAPIDEVSKIY, V.K. (Moskva); TITOV, A.A. (Moskva)

Sulfide-cadmium dosimeter for  $\beta$ - and gamma-radiation. Trudy  
Tsent. nauch.-issl. inst. rentg. i rad. 11 no.1:60-72 '64.  
(MIRA 18:11)

GURVICH, A.M. (Moskva); KRONGAUZ, A.M. (Moskva); NIKOLAYEV, A.M. (Moskva);  
IITOV, A.M. (Moskva)

Activation of single crystals on a CdS basis and study of their  
photoelectric properties. Trudy TSentr. nauch.-issl. inst. rentg.  
i rad. 11 no.1:286-299 '64. (Mika 18:11)

ZEL'VENSKIY, Ya.D.; TITOV, A.A.; SHALYGIN, V.A.

Studying the effect of pressure on mass transfer in a packed  
tower by means of radioisotopes. Trudy MKHTI no.40:96-112 '63.  
(MIRA 18:12)

KHONCHUK, V.N., 1930-1982, V.N.; KHONCHUK, A.A.

Determination of radiation characteristics based on two simultaneously measured values. Med. rad. 10 no.6:75-82 Je '65.

(MIRA 18-6)

1. Otdel klinicheskoy radiometrii nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta (dir. - prof. I.G. Iagorov), Moskva.

L 58526-65 EWA(h)/EWT(m)

ACCESSION NR: AP5014302

UP 0241/65/010/006/0073/0082

AUTHOR: Krongauz, A. N.; Lyapidevskiy, I. M.; Fitov, A. A.

TITLE: Determination of radiation characteristics from two values measured simultaneously

SOURCE: Meditsinskaya radiologiya, v. 10, no. 6, 1965, 79-82

TOPIC TAGS: radiation measurement, proportional counter, scintillation counter

ABSTRACT: Ordinary ionization chambers, Geiger counters, and other radiation detectors that measure either the current or the pulse rate of the ionization current information on the spectral composition of the radiation. It is shown that the value of the effect measured depends both on the spectral composition of the radiation and on the amount of the original radiation. The method proposed for the simultaneous measurement of the current and the pulse rate of the ionization current is described.

Card 1/2

L 58526-65

ACCESSION NR: AP5014302

general, the ratio of the two values characterizing the interaction of radiation with a substance can be determined by one of the following methods: (1) by comparing the values measured independently of each other in two experiments; (2) by comparing the values measured simultaneously by means of two detectors varying in counting efficiency; (3) by comparing two values measured simultaneously at the outlet of the same counter. Orig. art. has 4 figures.

ASSOCIATION: Otdel klinicheskoy dozimetrii nauchno-issledovatel'skogo rentgeno-radiatsionnogo instituta, Moscow

SUBMITTED: 00

ENCL: 00

SUB. DATE: 11, NP

NO REF SOV: 003

OTHER: 000

Card 2/2

ACCESSION NR: AR4032165

S/0058/64/000/002/A046/A046

SOURCE: Ref. zh. Fiz., Abs. 2A388

AUTHORS: Gurvich, A. M.; Krongauz, A. N.; Lyapidevskiy, V. K.;  
Mandel'tsvayg, Yu. B.; Nikiforova, A. D.; Popov, V. I.; Titov, A. A.

TITLE: Comparative dosimetric characteristics of single crystals  
of cadmium sulfide

CITED SOURCE: Tr. Vses. n.-i. in-ta med. instrumentov i oborud.,  
no. 5, 1962, 40-51

TOPIC TAGS: cadmium sulfide, single crystal cadmium sulfide,  
dosimetric characteristics, therapeutic x ray monitoring, radiation  
dose power, roentgen ampere characteristic, variation with hardness

TRANSLATION: The dosimetric characteristic of CdS single crystals,  
as applied to problems of x-ray therapy, were investigated. The

Card 1/3

ACCESSION NR: AR4032165

crystals used were grown either (a) by sublimation of luminor CdS by the Grillaud method (Group I) or (b) by sublimation of luminor CdS in a nitrogen jet (Group II). Crystals of the first group were activated with indium or gallium, and those of the second group with Cl or with AgCl, with a small amount of Zn introduced. The investigations were carried out with x-ray equipment RUM-7 ("soft" radiation, tube voltage 20--60 kV maximum) and RUM-3 ("hard" radiation, 100--200 kV maximum). The radiation dose power in air was measured with an ionization dosimeter. The sensitivity of crystals of Group I was 7--264  $\mu\text{A/r/min}$ , while those of group II occupied an intermediate position. A strictly linear reeugen-ampere characteristic was possessed by the least sensitive crystals. The "variation with hardness" was measured for the investigated crystals and the corresponding theoretical curve calculated. The results of the measurements and of the calculations are in satisfactory agreement in the region of strong absorption. In the region of weak absorption, the experimental "variation with hardness" is lower than the calcu-

Card 2/3



ACCESSION NR: AR4032165

lated value, owing to the inhomogeneity of the employed radiation.  
It is concluded that in the limited energy range used in x-ray  
therapy (at a generation voltage of 150--200 kV maximum), the inves-  
tigated single crystals, particularly those of the first group, can  
be used successfully as detectors in clinical x-ray dosimeters. Yu.  
Mandel'stveyg.

DATE ACQ: 31Mar64

SUB CODE: PH, SD

ENCL: 00

Card 3/3

ZEL'VENSKIY, Ya.D.; TITOV, A.A.; SHALYGIN, V.A.

Effect of pressure on mass transfer in a packed rectification  
column studied by means of radioisotopes. Khim. prom. no.2:  
116-123 F '63. (MIRA 16:7)

1. Moskovskiy Ordena Lenina khimiko-tehnologicheskoy institut  
imeni D.I. Mendeleeva.

(Packed towers) (Mass transfer)

(Distillation, Fractional)

TITOV, A.A., inzh.

Load elevator of the flexible scraper conveyor. Ugol.prom.  
no.5167-68 S-0 '62. (MIRA 15:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut  
ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti.  
(Conveying machinery)

ZELIVENSKIY, Ya.D.; SHALYGIN, V.A.; TITOV, A.A.

Equilibrium liquid - vapor of diluted solutions. Khim.i tekhn.  
topl.i masel 7 no.4:5-11 Ap '62. (MIRA 15:4)

1. Moskovskiy Ordena Lenina khimiko-tekhnologicheskii institut  
im. D.I.Mendeleeva.  
(Distillation, Fractional) (Phase rule and equilibrium)

TITOV, A.A.

Upper limit of sensitivity of a silver halide photographic  
layer. Zhur.nauch.i prikl. fot.i kin. 6 no.6:429-439 N-D '61.  
(M.A 15:1)

(Photographic emulsions)  
(Photographic sensitometry)

TITOV, A. F.

Mouth - Wounds and Injuries

Subcutaneous emphysema following an injury of buccal mucosa. Stomatologia no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1953. Unclassified.

TITOV, A.F.

Pharmacist Nikolai Mikhailovich Mart'ianov (1844-1904), founder of the  
Minusinsk Museum of Local History. Apt. delo. 4no.6:47-49 H-D '55.  
(MLRA 9:1)

(BIOGRAPHIES,  
Mart'ianov, Nikolai M.)

TITOV, A. F.

Mouth - Wounds and Injuries

Subcutaneous emphysema following an injury of buccal mucosa. Stomatologia no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.



1ST AND 2ND SERIES										3RD AND 4TH SERIES									
PROCESSING AND PROPERTIES INDEX																			
BC										A-2									
<p>New graphite deposits in the region of Krasnaya Polyana in North Caucasus. A. G. Titov (Comm. Acad. Sci. U.S.S.R., 1966, 20, 371-372). Small deposits of graphite are found in clay shales. F. J. O.</p>																			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
REGIONAL INDEX										GENERAL INDEX									
SUBJECT INDEX										AUTHOR INDEX									

Graphite deposit in the region of Krasnaya Polyana in North Caucasus. A. G. Titov. *Compt. rend. acad. sci. U. R. S. S.* 20, 371-2 (1959) (English).—Small accumulations of graphite occur in stringers with quartz in deposits of clay shale largely metamorphosed to slate. Graphitization and segregation probably took place during metamorphism and may have been aided by hot aqueous solutions. D. W. Pearce

A 10-514 METALLURGICAL LITERATURE CLASSIFICATION

KELDYSH, M.V., akademik; FEDOROV, Ye.L., akademik; ARTSIMOVICH, L.A., akademik; SISAKYAN, L.F., akademik; GORSKIY, I.I.; PAFITSA, P.L.; FOK, V.A.; IANDAU, L.D.; LIFSHITS, Ye.M.; SHAL'NIKOVA, A.I.; PLATONOV, I.M.; ALEKSEYEV, N.Ye.; VAYNSHTAYN, L.A.; PALLADIN, A.V., akademik; SATPAYEV, R.I., akademik; AMBARTSUMYAN, V.A., akademik; LUFREVICH, V.F.; MUSKELISVILI, N.I., akademik; KARAMEYEV, K.K.; MUSTEL', E.R.; MASEVICH, A.G., doktor fiz.-matem.nauk; EFRON, K.M.; MARTYNOV, D.Ya., prof.; GABOR'YEV, A.A., akademik; MAROV, K.K., prof.; COLOKOVA, A.G., prof.; FILKOVA, L.G., prof.; FEYVE, Ya.V.; SEMIKHANTOV, B.N., prof.; TITOV, A.G.; HYCHAGOV, G.I.; BARSLEYA, V.F.; VLASOVA, A.A.; BARANOVA, Ye.P.; KIBARDINA, L.A.; ISACHENKO, A.F.; IL'INA, Yu.P.; DANILOV, A.I., prof.; FLAUDE, K.K.; NECHAYEVA, T.N., prof.; CHEPER, L., doktor; SZANTO, Ladislav, akademik; BELACHIK, Yozef; FAN KUOK V'YEN; EYGENSON, M.S., prof. (L'vov); STARKOV, N.; ABRAMOVICH, Yu.; VOSKRESHENSKIY, V.; KROPACHEV, A.; REZVOY, D., prof., (L'vov); KONDRAT'YEV, V.N., akademik; LEEEDINSKIY, V.I., kand.geol.-mineral.-nauk; YANSHIN, A.L., akademik

"Priroda" is 50 years old. Priroda 51 no.1:3-16 Ja '62.  
(MIRA 15:1)

1. Prezident AN SSSR (for Keldysh). 2. Glavnyy uchenyy sekretar' Prezidiuma AN SSSR (for Fedorov). 3. Akademik-sekretar' Otdeleniya fiziko-matem.nauk AN SSSR (for Artsimovich). 4. Akademik-sekretar' Otdeleniya biologicheskikh nauk AN SSSR (for Sisakyan). 5. Chlen-korrespondent AN SSSR, zamestitel' akademika-sekretarya Otdeleniya  
(Continued on next card)

TITOV, Aleksandr Georgiyevich; KHOKHLOVA, N.G., red.; GORODILINA, T.I.,  
tekhn.red.

[Mineralogy and fundamentals of geology; manual for pedagogical  
schools] Mineralogiia s osnovnymi svedeniami iz geologii;  
uchebnoe posobie dlia pedagogicheskikh uchilishch. Izd.2., dop.  
Moskva, Gos.uchebno-pedagog.izd-vo M-vn prosv.RSSR, 1959. 126 p.  
(MIRA 13:5)

(Mineralogy--Textbooks)

BARKOV, Aleksandr Sergeyevich [deceased]. Prinimeli uchastiye: ARMAND, D.L.;  
YEFREMOV, Yu.K.; KOTEL'NIKOV, V.L.; TITOV, A.G.; YANIKOV, G.V..  
SMIRNOVA, N.P., red.; TSVETKOVA, S.V., tekhn.red.; KREYS, I.G.,  
tekhn.red.

[Glossary of physical geography; manual for teachers of geography]  
Slovar'-spravochnik po fizicheskoi geografii; posobie dlia uchitelei  
geografii. Izd.4., perer. i dop. Moskva, Gos.uchebno-pedagog.  
izd-vo M-va prosv. RSFSR, 1958. 329 p. (MIRA 12:4)  
(Physical geography--Dictionaries)

VARSANOF'YEVA, V.A., prof.; SEMIKHATOV, B.N., prof.; RAVIKOVICH, A.I., dots.;  
TITOV, A.G.; MAKSAIEV, A.V., tekhn.red.

[Programs of pedagogical institutes; geology] Programmy pedagogicheskikh institutov; geologiya. Moskva, Gos. uchebno-pedagog. izd-vo  
M-va prosv. RSFSR, 1957. 21 p. (MIRA 11:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i  
srednikh pedagogicheskikh uchebnykh zavedenii.  
(Geology--Study and teaching)

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755820015-7

Turn A C

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R001755820015-7"

ТИГВ, А. А.

Mineralogy with basic information on crystallography. Moskva, Gos. uchelno--  
pedagog. izd., 1930. 204 p. maps.

InU

1. Mineralogy.



TITOV, A. G.

Minerals as fertilizers. Moskva, Sel'khoz-giz, 1940. 109 p. (Mashino-populiarnaia seriia. Shkol'naia biblioteka) (51-46981)

TN911.T5

1. Fertilizers and manures. 2. Mineral industries - Russia

TITOV, A. G.

7416

TITOV, A. G.

MINERALOGIYA S OSNOVNYMI SVETENIYAMI 12 GEOLOGICH, VCHER, POSODNYE LNYA PED. UC  
UCHETISHCH. M., UCHFEDGIA, 1954. 100 s. s. ILL. 23 sm. 3,000 ENZ. 1R 90K  
V per.-- (55 4233) p 549

So: Knizhnaya Lotopis ( page 20) Vol. 7, 1955

VLASOV, M.A., ekonomist; TITOV, A.G., ekonomist

Consultation on applying the Regulation on bonus wages for tele-  
communication operational personnel. Vest.sviazi 15 no.9:31-32  
S '55.

(MLRA 8:12)

(Telecommunication) (Wages)

VLASOV, M.A., ekonomist; TITOV, A.G., ekonomist

Questions and answers on applying the regulation concerning bonus wages to communication operational personnel. (Orders of the U.S.S.R. Minister of Communications no. 732 of August 30 and no. 960 of December 2, 1954.)  
Vest. svyazi 15 no.7:25-26 J1 '55. (MLRA 8:8)  
(Telecommunication) (Wages)